

WHAT IS CLAIMED IS:

1. A discharge lamp comprising:

5 a luminous bulb in which a luminous material is enclosed and a pair of electrodes are opposed to each other in the luminous bulb; and

a pair of sealing portions for sealing a pair of metal foils electrically connected to the pair of electrodes, respectively;

10 wherein each of the pair of metal foils has an external lead on a side opposite to a side electrically connected to a corresponding electrode of the pair of electrodes,

15 at least one of the pair of sealing portions is provided with a reflective film on a surface of the sealing portion in a portion where a connection portion of the external lead and the metal foil is sealed, the reflective film containing a material having a reflectance larger than that of a material constituting the sealing portion.

20 2. The discharge lamp of claim 1, wherein the reflective film contains a material having a heat radiation rate larger than that of the material constituting the sealing portion.

25 3. The discharge lamp of claim 1, wherein the connection portion is a welded portion where the external lead formed of molybdenum is connected to the metal foil formed of molybdenum by welding.

4. A lamp unit comprising a discharge lamp and a reflecting mirror for reflecting light emitted from the discharge lamp, the discharge lamp comprising:

5 a luminous bulb in which a luminous material is enclosed and a pair of electrodes are opposed to each other in the luminous bulb; and

10 a pair of sealing portions for sealing a pair of metal foils electrically connected to the pair of electrodes, respectively;

wherein each of the pair of metal foils has an external lead on a side opposite to a side electrically connected to a corresponding electrode of the pair of electrodes,

15 one of the pair of sealing portions is disposed on an emission direction side in the reflecting mirror,

20 the one sealing portion disposed on the emission direction side is provided with a reflective film on a surface of the sealing portion in a portion where a connection portion of the external lead and the metal foil is sealed, the reflective film containing a material having a reflectance larger than that of a material constituting the sealing portion, and

25 the reflective film reflects light incident to the reflecting mirror from an optical system disposed forward in the emission direction and irradiating the connection portion, thereby suppressing a temperature increase in the connection portion.

5. The discharge lamp of claim 4, wherein the reflective film contains a material having a heat radiation rate larger than that of the material constituting the sealing portion.

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6. A lamp unit comprising a discharge lamp and a reflecting mirror for reflecting light emitted from the discharge lamp, the discharge lamp comprising:

10 a luminous bulb in which a luminous material is enclosed and a pair of electrodes are opposed in the luminous bulb; and

a pair of sealing portions for sealing a pair of metal foils electrically connected to the pair of electrodes, respectively;

15 wherein each of the pair of metal foils has an external lead on a side opposite to a side electrically connected to a corresponding electrode of the pair of electrodes,

one of the pair of sealing portions is disposed on an emission direction side in the reflecting mirror,

20 the one sealing portion disposed on the emission direction side includes a temperature focus region where a temperature of the sealing portion is a maximum that occurs because of light incident to the reflecting mirror from an optical system disposed forward in the emission direction and
25 irradiating the connection portion, and,

the connection portion in the one sealing portion where the external lead and the metal foil are connected is

provided in a position outside the temperature focus region, thereby suppressing a temperature increase in the connection portion.

5 7. The discharge lamp of claim 4, wherein the connection portion is a welded portion where the external lead formed of molybdenum is connected to the metal foil formed of molybdenum by welding.

10 8. The lamp unit of claim 4, wherein the optical system comprises a reflection type imaging device, and a color foil for projecting emitted light from the reflecting mirror on the reflection type imaging device, and

15 light irradiating the connection portion includes at least light that is a part of light emitted from the reflecting mirror toward the optical system, and is reflected by the color foil and incident to the reflecting mirror.

20 9. An image display apparatus comprising the lamp unit of claim 4, and an optical system using the lamp unit as a light source.

10. The image display apparatus of claim 9, wherein the optical system includes a digital micromirror device.

25 11. An image display apparatus comprising the lamp unit of claim 6, and an optical system using the lamp unit as a light

source.

12. The image display apparatus of claim 11, wherein the optical system includes a digital micromirror device.

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